

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Notice of Proposed Rulemaking)	
18 FCC Rcd 13187, 13188 ¶1 (2003))	ET Docket No. 03-137
)	
And)	
)	
Service Rules for the Advanced Wireless Services)	WT Docket No. 12-357
H Block---Implementing Section 6401 of the)	
Middle Class Tax Relief and Job Creation Act of)	
2012 Related to the 1915-1920 MHz and)	
1995-2000 MHz Bands ¶53 footnote 95)	

To: Office of the Secretary
Federal Communications Commission
Washington, DC 20554

Comment Filed by: Deborah M. Rubin
19160 Dove Creek Drive
Tampa, FL 33647
mamarubin@msn.com
813-866-9400

February 2, 2013

AFFIDAVIT OF Deborah M. Rubin

State of Florida]

Hillsborough County]

I, Deborah M. Rubin, attest that my statements are true to the best of my knowledge.

Comment round for ET Docket No. 03-137 and WT Docket No. 12-357.

1. My name is Deborah M. Rubin. My address is 19160 Dove Creek Drive, Tampa, FL 33647.
2. My family and I are exposed to unnatural, manmade, microwave radiation against our wills in school, at work, in our home, and every place in between every single day. The FCC must review its policy and guidelines to protect our health.

3. **First and foremost, the FCC Guidelines must be revised because they are not only insufficient to protect the public from the adverse biological effects of low level microwave and radiowave exposure, but they are also realistically unenforceable and ineffective**—even with an alleged safety factor of 10.

3a. **Real world personal exposures are unpredictable and may frequently exceed FCC guidelines undetected, as is demonstrated in Hondou, et al 2002:**

<http://arxiv.org/ftp/physics/papers/0703/0703124.pdf>

"For a standard train carriage, with a carrying capacity of 151 people, Hondou's calculations show that it is possible to exceed ICNIRP exposure limits if 30 people, each with a mobile phone that emits radio waves at a power of 0.4 watts, all use their phones at the same time. The peak power a mobile phone is allowed to produce is two watts."

3b. Laboratory studies do not and can not simulate every possible real life exposure.

3c. The guidelines can not possibly account for every individual in every possible position he or she may occupy in relation to all microwave-emitting devices in his or her personal space.

3d. In our daily lives, we are exposed to the multiple personal wireless devices of numerous individuals simultaneously—in school, at work, on the train, on the bus, in the movie theater, etc.

3e. Along with those exposures, we are exposed to multiple infrastructural sources-- including, but not limited to the involuntary exposures from towers, smart meters, wifi routers, etc.

3f. Many towers already have collocated sets of antennae, further increasing the exposure level and complexity of the waveforms.

3g. As if that weren't hazardous enough, FCC is currently considering adding high-powered, Super WiFi to that infrastructural list-- even as they are allegedly now considering the revision of their guidelines for safety. Super WiFi is capable of easily penetrating concrete walls, etc.

What additional health impact will Super WiFi have on all living things, especially the young, the ill, the elderly and the electromagnetically hypersensitive people? EHS, electromagnetic hypersensitivity, is recognized by many pre-eminent researchers and the Cleveland Clinic. Whom shall we hold accountable for the loss of our good health?

3h. Various surfaces reflect radio and microwaves, which can amplify the exposure in unique and unpredictable ways. Again FCC allows this hazardous

physical agent to invade the walls of my home without my consent and against my will. They are serving the Industry before my Health. Current FCC guidelines do not protect the Public in the Real World.

4. The Public has not been fully informed that there are thousands of peer-reviewed studies showing adverse effects from microwave and radiowave exposure.

4a. The FCC has not responsibly informed the unsuspecting Public--whom FCC is obligated to serve--that as of May 31, 2011, radiowave electromagnetic fields are a Class 2B carcinogen per the International Agency for Research on Cancer (IARC) of the World Health Organization.

4b. FCC and Industry do not inform the public and furthermore deliberately misleads them.

For example, PG&E's website states:

<http://www.pge.com/myhome/edusafety/systemworks/rf/>

"The World Health Organization (WHO) advises: "A large number of studies have been performed over the last two decades to assess whether mobile phones pose a potential health risk. *To date, no adverse health effects have been established for mobile phone use.*" Really? That statement is in direct contradiction to the IARC position stated in 4a. And to numerous peer-reviewed studies.

According to FCC's site: <http://www.fcc.gov/guides/wireless-devices-and-health-concerns>

"According to the FDA and the World Health Organization (WHO), among other organizations, to date, the weight of scientific evidence has not effectively linked exposure to radio frequency energy from mobile devices with any known health problems."

Again a contradiction. An internal 1993 FDA memo states there is strong data

indicating harm:

<http://microwavenews.com/news/backissues/j-f03issue.pdf>

“In the spring of 1993 at the height of public concern over cell phone–brain tumour risks, Food and Drug Administration (FDA) biologists concluded that the available data ****strongly suggest**** that microwaves can ****accelerate the development of cancer**** This assessment is in an internal agency memo recently obtained by Microwave News under the Freedom of Information Act.”

EPA, besides the Hankins letter found here:

<http://www.emrpolicy.org/faq/five.htm>

Also see:

http://microondes.files.wordpress.com/2010/03/robert_c_kane_cellular_telephone_russian_roulette.pdf

“U.S. EPA released a draft copy of its report on the evaluation of the potential carcinogenicity of electromagnetic fields. The report, first of all, finds that in view of these laboratory studies, there is reason to believe that the findings of carcinogenicity in humans are biologically plausible. Of course, they were referring to laboratory studies that they had reviewed. This admission by the EPA means that the carcinogenic effects of electromagnetic energy are valid or likely....The EPA has concluded that the results of the occupational cancer studies are remarkably consistent [T]he consistency and specificity of the findings provide evidence that EM- field exposure in the workplace may pose a carcinogenic risk for adults . . .** (see footnote 94). Radiofrequency energy exposure has moved into the everyday environment for most people. What was true for the relatively few individuals in the past is now, by the EPA’s own conclusions, the norm for the entire population.

“In summary form, the EPA’s report of five case control studies found that four of the five noted significantly elevated risks of cancer in the following categories of employment; (1) gliomas and astrocytomas in Maryland electricians, telephone servicemen, linemen, railroad and telecommunication workers, engineers as well as

electronic engineers;

(2) primary brain cancer in workers of Philadelphia, northern New Jersey, and south Louisiana involved with design, manufacture, repair, or installation of electrical and electronic equipment;

(3) brain cancer in East Texas male workers involved in highly exposed (EM fields) occupations in the transportation, communication, and the utilities industry;

(4) brain cancer in workers identified in a 16-state NCHS survey of industries and occupations" (see footnote 94). One common thread that runs through these four case studies is brain cancer.

“Realize now that the levels of electromagnetic energy to which those workers were typically exposed were much lower than the exposure to which a portable cellular telephone user is subjected with each telephone call. The EPA, in this report, concedes that “There is a link between exposure to EM fields and certain forms of site-specific cancer, namely leukemia, CNS, and lymphoma” (see footnote 94). Of course, in the instances when the exposure is directed at the head and brain of the human subject, as it is with portable cellular telephone use, we should expect that the predominant form of cancer would be central nervous system (brain) cancer.”

FCC safety statements are misleading. Clearly. FCC Guidelines are not protective of Human or Environmental Health. We should not have to sacrifice either for Industry.

4c. The Public voluntarily uses numerous devices every day, for hours a day, and is involuntarily exposed, all day long in many cases, with no understanding of the health hazard. The Public relies on FCC to protect them. FCC is not a health agency and therefore is not qualified to set public health policy. The Telecom Act of 1996 prohibits the properly qualified Health agencies and Health experts from setting proper, science- based exposure limits that are truly protective of people and their environment. FCC should be transparent in all aspects of Guideline setting and

include independent scientists from all sides of the Health debate.

5. Exposure is shown to cause adverse biological effects in thousands of peer-reviewed, scientific studies. FCC's own website says:

http://transition.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet56/oet56e4.pdf

"Several years ago publications began appearing in the scientific literature, largely overseas, reporting the observation of a wide range of low-level biological effects.....More recently, other scientific laboratories in North America, Europe and elsewhere have reported certain biological effects after exposure of animals ("in vivo") and animal tissue ("in vitro") to relatively low levels of RF radiation. **These reported effects have included certain changes in the immune system, neurological effects, behavioral effects, evidence for a link between microwave exposure and the action of certain drugs and compounds, a "calcium efflux" effect in brain tissue (exposed under very specific conditions), and effects on DNA....**In general, while the possibility of "non-thermal" biological effects may exist, whether or not such effects might indicate a human health hazard is not presently known. **[as if it could possibly be benign]** Further research is needed to determine the generality of such effects and their possible relevance, if any, to human health."

5a. As to the first part of that statement, reports of low-level adverse effects began appearing 40 years ago or more. For example:

Raines, 1981. ELECTROMAGNETIC FIELD INTERACTIONS WITH THE HUMAN BODY: OBSERVED EFFECTS AND THEORIES. NASA Purchase Order No. S-75151B . Report Prepared for: National Aeronautics and Space Administration Goddard Space Flight Center Greenbelt, Maryland 20771. April 9, 1981.

Adams and Williams. 1975. Biological Effects of electromagnetic radiation (radiowaves and microwaves)--Eurasian community countries. Prepared by U.S. Army Medical Intelligence and Information Agency Office of the Surgeon General.

Cleary, 1970. Biological Effects and Health Implications of Microwave Radiation, Symposium Proceedings. Richmond Virginia, September 17-19, 1969. Sponsored by Medical College of Virginia, Virginia Commonwealth University with the support of Bureau of Radiological Health, U.S. Department of Health, Education, and Welfare, Public Health Service, Environmental Health Service.

Bergman 1965. The Effect of Micro Waves on the Central Nervous System. Pub. Research and Scientific Laboratory of Ford Motor Company, 1965.

5b. Secondly, with that knowledge, FCC has somehow determined it is wise to blanket the entire country, including our schools, hospitals, communities, and even our homes by way of smart meters and cell towers with involuntary exposure to microwave radiation.

Is this a reasonable, science-based public health policy?

6. Our children are in danger. The Public has not been properly informed of the documented health hazards associated with exposures to wireless devices. FCC, other regulators and Industry are willfully blind to the documented health hazards. FCC is intentionally misleading the public into believing there are no risks associated with the use of wireless devices. FCC is allowing Industry to market microwave-emitting toys to the parents of infants and toddlers for use by infants and toddlers.

Once again, is it a reasonable public policy to expose our entire society and environment, including our youngest children to a form of radiation that the FCC admits “might indicate a human health hazard”? At best you have uninformed consent from voluntary users; at worst, from those of us who protest, you have exposed us to a health hazard against our wills.

6a. Children are demonstrated in the scientific, peer-reviewed literature to be more sensitive to the effects of microwave/radiowave radiation than adults because they are still maturing. Fetuses in the womb have been demonstrated to be affected.



Penetration of radiation on brain of an adult, a 10 year old and a 5 year old

Children are smaller, their bones are thinner, their nervous and immune systems are not fully developed, and they will have a longer exposure over their lifetimes. Microwave radiation penetrates more deeply into a child's body. Schools are increasingly going wireless with goals to be completely wireless by 2015.

<http://www.tampabay.com/news/education/k12/florida-looks-at-taking-school-textbooks-completely-digital-by-2015/1152138>

Our schools teach the scientific method and yet they and our government do not apply it to public health policy. How can such an initiative go forward with the IARC classification and thousands of studies showing adverse biological effects from exposure levels orders of magnitude lower than the current guidelines? Our children's health and lives are at stake.

Children are irradiated in school for 6 to 8 hours a day from age 5 and up when they are at their most vulnerable.

Sample of studies showing Children are more vulnerable than adults:

<http://informahealthcare.com/doi/abs/10.3109/15368378.2011.622827>

(with link to full study text)

Exposure Limits: The underestimation of absorbed cell phone radiation, especially in children

The existing cell phone certification process uses a plastic model of the head called the Specific Anthropomorphic Mannequin (SAM), representing the top 10% of U.S. military recruits in 1989 and greatly underestimating the Specific Absorption Rate (SAR) for typical mobile phone users, especially children. A superior computer simulation certification process has been approved by the Federal Communications Commission (FCC) but is not employed to certify cell phones. In the United States, the FCC determines maximum allowed exposures. Many countries, especially European Union members, use the “guidelines” of International Commission on Non-Ionizing Radiation Protection (ICNIRP), a non governmental agency. Radiofrequency (RF) exposure to a head smaller than SAM will absorb a relatively higher SAR. Also, SAM uses a fluid having the average electrical properties of the head that cannot indicate differential absorption of specific brain tissue, nor absorption in children or smaller adults. The SAR for a 10-year old is up to 153% higher than the SAR for the SAM model. When electrical properties are considered, a child's head's absorption can be over two times greater, and absorption of the skull's bone marrow can be ten times greater than adults. Therefore, a new certification process is needed that incorporates different modes of use, head sizes, and tissue properties. Anatomically based models should be employed in revising safety standards for these ubiquitous modern devices and standards should be set by accountable, independent groups.

<http://www.ncbi.nlm.nih.gov/pubmed/20463374?dopt=Abstract>

<http://www.ncbi.nlm.nih.gov/pubmed/20107250>

http://www.radiationresearch.org/images/RRT_articles/Buchner%20Eger%20Rimbach%20Study%202011%20ENG%20FINAL%20Revised%2029%20July%202011.pdf

<http://www.scribd.com/doc/75218005/Hormone-Effects-Eskander-Et-Al-2011>

<http://www.benthamscience.com/open/topedj/articles/V006/46TOPEDJ.pdf>

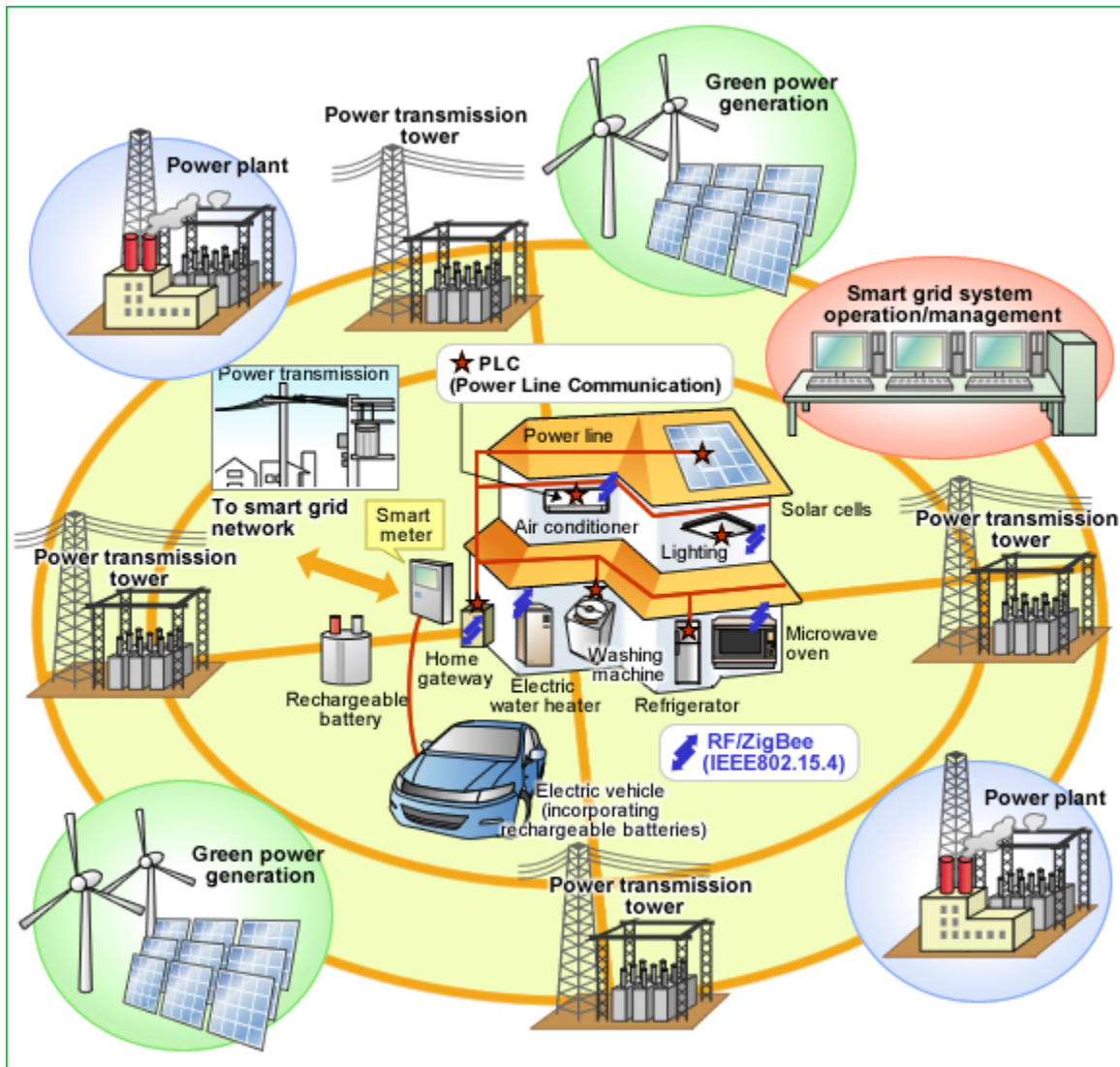
http://www.avaate.org/IMG/pdf/NINOS_Cell_phone_use_and_behavioural_problems_in_Iech.2010.115402.full.pdf

http://www.bioinitiative.org/report/wp-content/uploads/pdfs/sec12_2012_Evidence_%20Childhood_Cancers.pdf

7. Current FCC guidelines do not protect the Public from the synergistic effects of microwave/radiowave exposure and other hazards such as chemical toxins. Furthermore, the complex interactions of RF, ELF, Xray, gamma, and UV radiations have not been considered in the guidelines.

8. Another large scale microwave deploying initiative is currently underway, despite the aforementioned, long-standing body of peer-reviewed, scientific literature showing adverse outcomes from low-level microwave/radiowave exposure. The SmartGrid is forcing microwave-emitting utility meters onto nearly every single home in America. Additionally, the wireless Grid is increasing the number of towers that involuntarily irradiate every living thing every single day. And the home area network, the final component of the SmartGrid, will exponentially increase the radiation in our homes from the chips in the appliances, thermostats and their communication with the meters.

.



What you don't see in this diagram are all the living people, plants, animals and other life forms that are being irradiated. Einstein said, **"Concern for man and his fate must always form the chief interest of all technical endeavors. Never forget this in the midst of your diagrams and equations."** Let us not forget or fail to rigorously analyze the data set and to honestly consider the consequences of our actions. We must correct our mistakes based on what we know now.

Submitted by,

Deborah M. Rubin

19160 Dove Creek Drive

Tampa, FL 33647

February 3, 2013